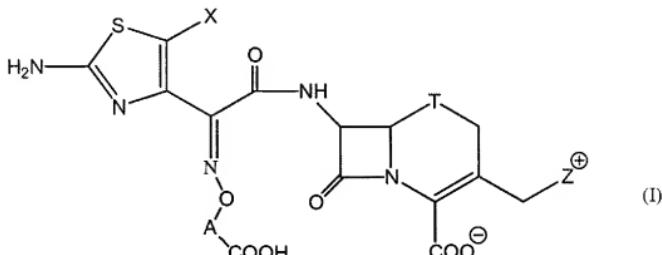


AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A compound of the formula (I):



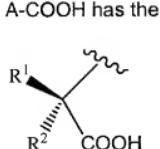
,~~an ester, a pharmaceutically acceptable salt or solvate thereof or a compound of the formula (I) in which the amino group on the thiazole at the 7-position is optionally protected,~~

wherein,

T is S or SO;

X is halogen, CN, carbamoyl optionally substituted with lower alkyl, lower alkyl, lower alkoxy, or lower alkylthio;

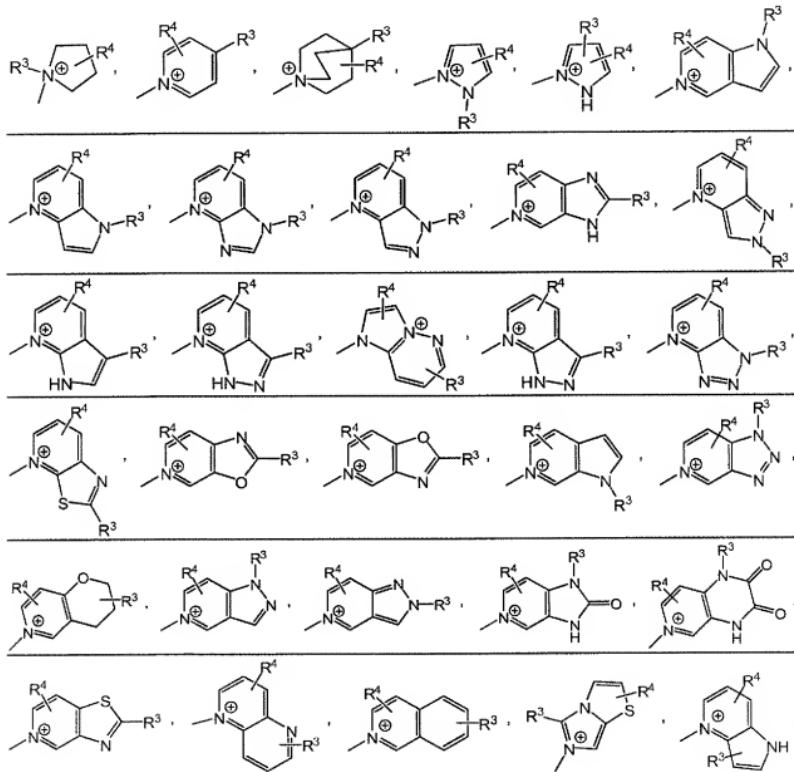
A-COOH has the formula:

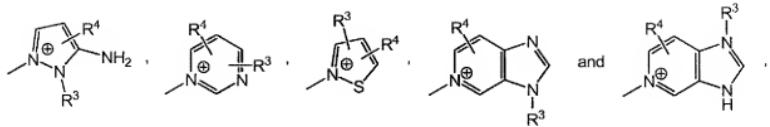


wherein R¹ is hydrogen and R² is lower alkyl;

Z+ is an optionally substituted cationic N-atom-containing a heterocyclic group

having a formula selected from:





wherein R³ and R⁴ are each independently selected from hydrogen, optionally substituted lower alkyl, optionally substituted cycloalkyl, optionally substituted lower alkenyl, optionally substituted amino, hydroxy, halogen, optionally substituted carbamoyl, optionally substituted alkyloxy, and optionally substituted heterocyclic group.

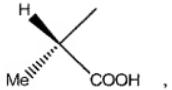
Claim 2 (previously presented): A compound according to claim 1, wherein T is S.

Claim 3 (canceled)

Claim 4 (previously presented): A compound according to claim 1, wherein X is halogen or lower alkyl.

Claim 5 (Cancelled)

Claim 6 (previously presented): A compound according to claim 1, wherein A-COOH has a formula selected from

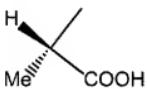


wherein Me is methyl; Et is ethyl and i-Pr is isopropyl.

Claim 7 (Canceled)

Claim 8 (previously presented): A compound according to claim 1 wherein R² is methyl.

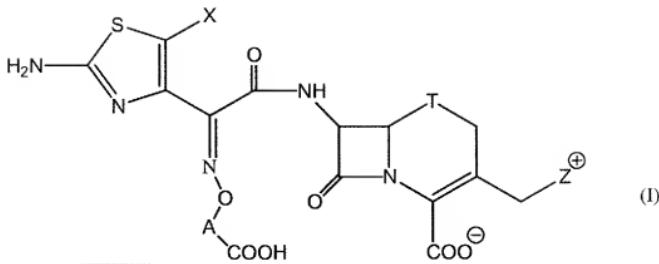
Claim 9 (currently amended): A compound according to claim 1, wherein A-COOH has the formula:



Claim 10 (canceled):

Claim 11 (canceled):

Claim 12 (currently amended): ~~A compound according to claim 1A compound of the formula (I):~~



a pharmaceutically acceptable salt or solvate thereof,

wherein,

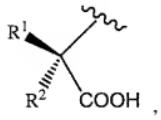
T is S or SO;

X is halogen, CN, carbamoyl optionally substituted with lower alkyl, lower alkyl,

lower

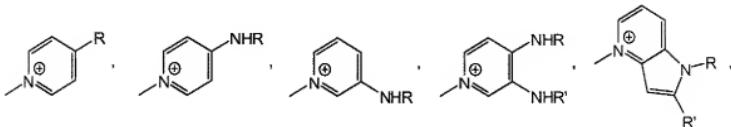
alkoxy, or lower alkylthio;

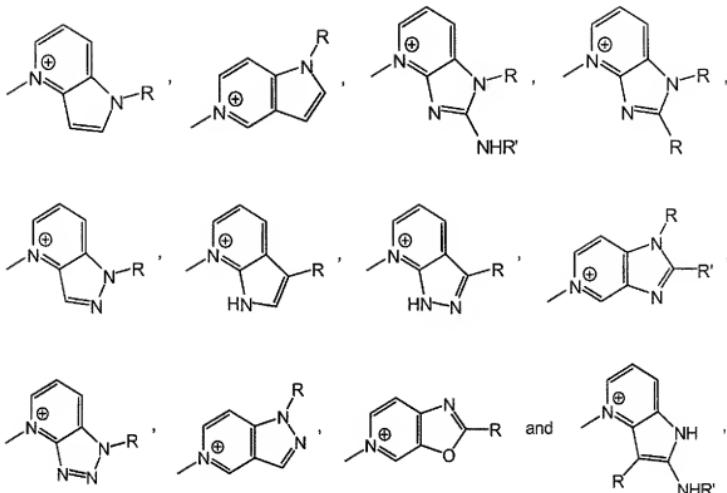
A-COOH has the formula:



wherein R¹ is hydrogen and R² is lower alkyl; and

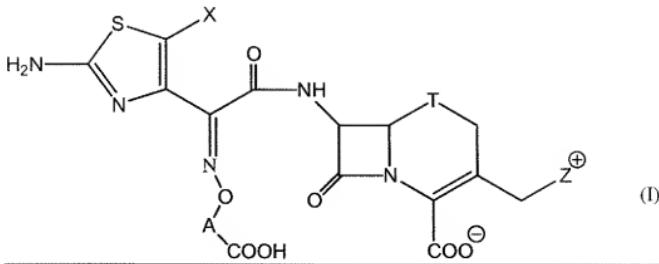
wherein Z⁺ is a heterocyclic group having a formula selected from:





wherein R and R' are each independently selected from hydrogen, lower alkyl, amino, mono- or di-lower alkylamino, lower alkenyl, amino lower alkyl, lower alkylamino lower alkyl, lower alkylamino lower alkylamino, amino lower alkylxyamino, amino substitute with optionally substituted heterocyclic group, hydroxy lower alkyl, hydroxy lower alkylamino lower alkyl, lower alkoxy lower alkyl, carbamoyl lower alkyl, carboxy lower alkyl, lower alkylcarbonylamino lower alkyl, lower alkoxy carbonylamino lower alkyl, lower alkyloxy, lower alkyl having 2 kinds of substituents, and optionally substituted heterocyclic group.

Claim 13 (currently amended): A compound according to claim 1, A compound
of the formula (I):



a pharmaceutically acceptable salt or solvate thereof,

wherein,

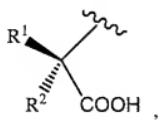
T is S or SO;

X is halogen, CN, carbamoyl optionally substituted with lower alkyl, lower alkyl,

lower

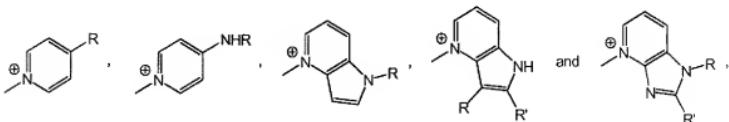
alkoxy, or lower alkylthio;

A-COOH has the formula:



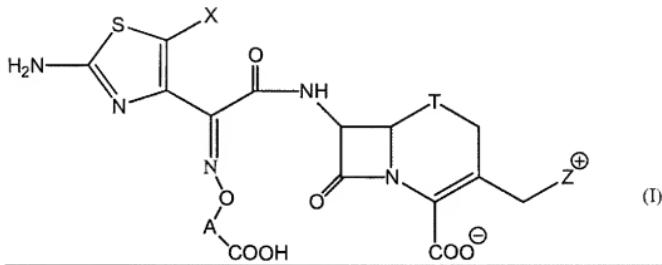
wherein R¹ is hydrogen and R² is lower alkyl; and

wherein Z⁺ is a heterocyclic group having a formula selected from:



wherein R is hydrogen, lower alkyl, amino lower alkyl, lower alkylamino lower alkyl, amino substituted with optionally substituted heterocyclic group, or optionally substituted heterocyclic; and R' is amino.

Claim 14 (currently amended): A compound according to claim 1,A compound of the formula (I):



a pharmaceutically acceptable salt or solvate thereof,

wherein,

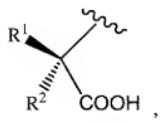
T is S or SO;

X is halogen, CN, carbamoyl optionally substituted with lower alkyl, lower alkyl,

lower

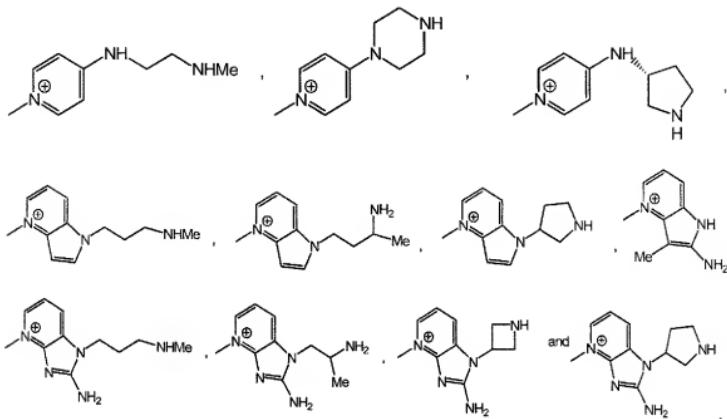
alkoxy, or lower alkylthio;

A-COOH has the formula:



wherein R¹ is hydrogen and R² is lower alkyl; and

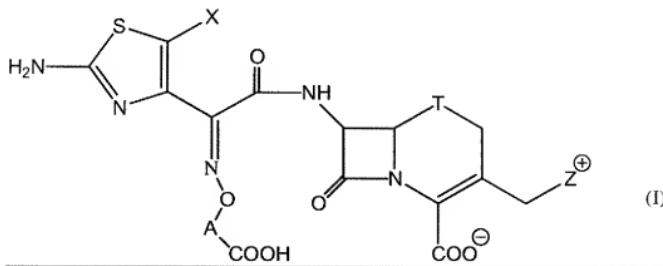
wherein Z^+ is a heterocyclic group having a formula selected from:



wherein Me is methyl.

Claim 15 (previously presented): A compound according to claim 1, wherein T is S and X is halogen.

Claim 16 (currently amended): A compound according to claim 1A compound of the formula (I):



a pharmaceutically acceptable salt or solvate thereof,

wherein,

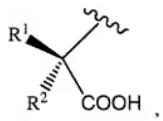
T is S;

X is halogen, CN, carbamoyl optionally substituted with lower alkyl, lower alkyl,

lower

alkoxy, or lower alkylthio;

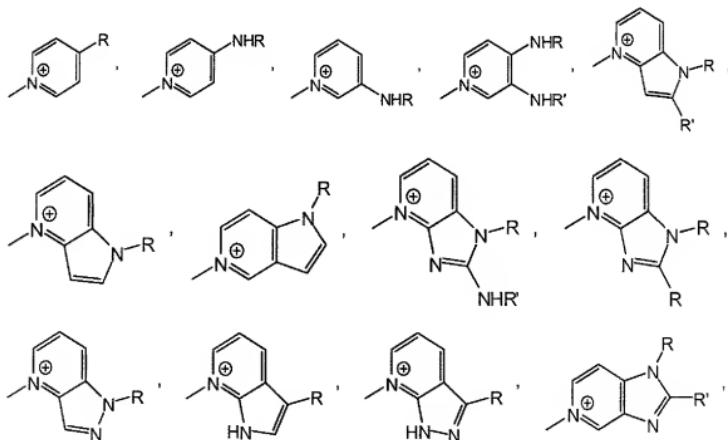
A-COOH has the formula:

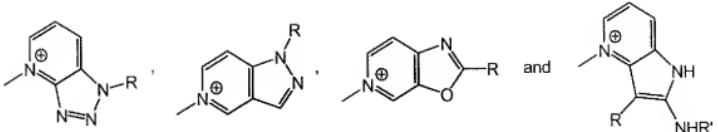


wherein R¹ is hydrogen and R² is methyl; and

wherein T is S ; X is halogen; R² is

methyl; and Z* is a heterocyclic group group having a formula selected from

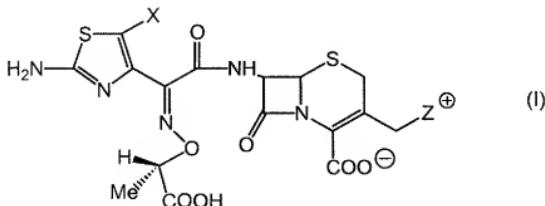




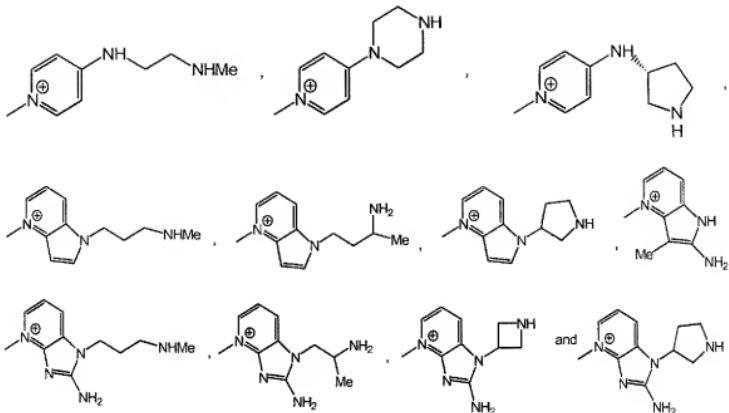
wherein R and R' are each independently selected from hydrogen, lower alkyl, amino, mono- or di-lower alkylamino, lower alkenyl, amino lower alkyl, lower alkylamino lower alkyl, lower alkylamino lower alkylamino, amino lower alkyloxyamino, amino substitute with optionally substituted heterocyclic group, hydroxy lower alkyl, hydroxy lower alkylamino lower alkyl, lower alkoxy lower alkyl, carbamoyl lower alkyl, carboxy lower alkyl, lower alkylcarbonylamino lower alkyl, lower alkoxy carbonylamino lower alkyl, lower alkyloxy, lower alkyl having 2 kinds of substituents, and optionally substituted heterocyclic group.

Claim 17 (Canceled)

Claim 18 (currently amended): A compound according to claim 1, having the following formula, or a pharmaceutically acceptable salt or a solvate thereof:



wherein X is halogen; Z⁺ is a heterocyclic group selected from



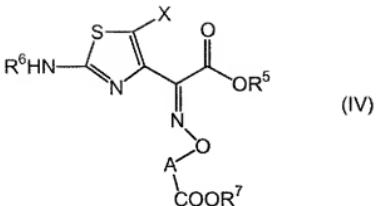
wherein Me is methyl.

Claims 19-21 (Canceled)

Claim 22 (Previously presented): A pharmaceutical composition containing a the compound of claim 1.

Claim 23 (Previously presented): An antibacterial composition containing a the compound of claim 1.

Claim 24 (Withdrawn): A compound or pharmaceutically acceptable salt, of the formula:



(wherein, X is halogen, CN, carbamoyl optionally substituted with lower alkyl, lower alkyl, lower alkoxy, or lower alkylthio ; A is of the formula:



R^5 is hydrogen or carboxy-protecting group; R^6 is hydrogen or amino-protecting group; R^7 is hydrogen or carboxy-protecting group)

Claim 25 (Withdrawn): A compound or pharmaceutically acceptable salt according to claim 24, wherein X is halogen or lower alkyl.

Claim 26 (Withdrawn): A compound or pharmaceutically acceptable salt according to claim 24, wherein X is halogen.